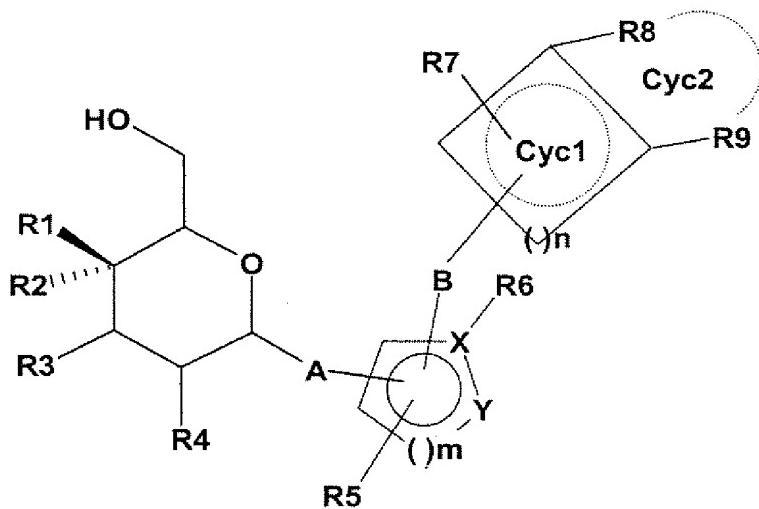


1. (currently amended) A compound of formula I



I

wherein

R1 and R2 are each independently F or H or one of said radicals R1 and R2 may be OH;

R3 is OH or F, with the proviso that at least one of the radicals R1, R2 and R3 must be F;

R4 is OH;

A is O, NH, CH₂, S or a bond;

X is C, O, S or N, with the proviso that X is C when Y is O or S;

Y is N, O or S;

m is 1 or 2;

R5 is hydrogen, F, Cl, Br, I, OH, CF₃, NO₂, CN, COOH, CO(C₁-C₆)-alkyl, COO(C₁-C₆)-alkyl, CONH₂, CONH(C₁-C₆)-alkyl, CON[(C₁-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy, HO-(C₁-C₆)-alkyl[[,]] or (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl, phenyl, benzyl, (C₁-C₆)-alkoxycarboxyl,

wherein said CO(C₁-C₆)-alkyl, COO(C₁-C₆)-alkyl, CONH(C₁-C₆)-alkyl, CON[(C₁-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy, HO-(C₁-C₆)-alkyl[[,]] and (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl and (C₁-C₆)-alkoxycarboxyl-radicals are optionally substituted with one or more fluorine atoms[[,]];:

~~$\text{SO}_2\text{-NH}_2$, $\text{SO}_2\text{NH}(\text{C}_1\text{-}\text{C}_6)$ -alkyl, $\text{SO}_2\text{N}[(\text{C}_1\text{-}\text{C}_6)\text{-alkyl}]_2$, $\text{S}(\text{C}_1\text{-}\text{C}_6)$ -alkyl, $\text{S}(\text{CH}_2)_o$ -phenyl, $\text{SO}(\text{C}_1\text{-}\text{C}_6)$ -alkyl, $\text{SO}(\text{CH}_2)_o$ -phenyl, $\text{SO}_2(\text{C}_1\text{-}\text{C}_6)$ -alkyl, $\text{SO}_2(\text{CH}_2)_o$ -phenyl,~~

wherein said ~~$\text{SO}_2\text{NH}(\text{C}_1\text{-}\text{C}_6)$ -alkyl, $\text{SO}_2\text{N}[(\text{C}_1\text{-}\text{C}_6)\text{-alkyl}]_2$, $\text{S}(\text{C}_1\text{-}\text{C}_6)$ -alkyl, $\text{SO}(\text{C}_1\text{-}\text{C}_6)$ -alkyl and $\text{SO}_2(\text{C}_1\text{-}\text{C}_6)$ -alkyl~~ radicals are optionally substituted with one or more fluorine atoms, and wherein the phenyl ring of said ~~$\text{S}(\text{CH}_2)_o$ -phenyl, $\text{SO}(\text{CH}_2)_o$ -phenyl and $\text{SO}_2(\text{CH}_2)_o$ -phenyl~~ radicals is optionally mono- or disubstituted with F, Cl, Br, OH, CF₃, NO₂, CN, OCF₃, O(C₁-C₆)-alkyl, (C₁-C₆)-alkyl or NH₂, and wherein o is 0, 1, 2, 3, 4, 5, or 6,

~~NH_2 , $\text{NH}(\text{C}_1\text{-}\text{C}_6)$ -alkyl, N((C₁-C₆)-alkyl)₂, $\text{NH}(\text{C}_1\text{-}\text{C}_7)$ -acyl, phenyl or O(CH₂)_o-phenyl,~~

wherein the phenyl ring of said phenyl and O(CH₂)_o-phenyl radicals is optionally mono-, di-, or trisubstituted with F, Cl, Br, I, OH, CF₃, NO₂, CN, OCF₃, O(C₁-C₆)-alkyl, (C₁-C₆)-alkyl, NH₂, NH(C₁-C₆)-alkyl, N((C₁-C₆)-alkyl)₂, SO₂-CH₃, COOH, COO(C₁-C₆)-alkyl or CONH₂, and wherein o is as hereinabove defined;

or, when Y is S, R5 and R6 taken together with the carbon atoms to which they are attached may form a phenyl ring;

- R6 is H[[.]] or (C₁-C₆)-alkyl, (C₁-C₆)-alkenyl, (C₃-C₆)-cycloalkyl, or phenyl wherein said phenyl radical is optionally substituted with halogen or (C₁-C₄)-alkyl;
- B is (C₀-C₁₅)-alkanediyl, wherein one or more of the carbon atoms in said alkanediyl radical may be replaced, independently of one another, with O, (C=O), CH=CH, C=C, S, CH(OH), CHF, CF₂, (S=O), (SO₂), N((C₁-C₆)-alkyl), N((C₁-C₆)-alkyl-phenyl) or NH-CH₂- or -CO-NH-CH₂-;
- n is [[0, 1,.]] 2[[.]] or 3 [[or 4]];.
- Cyc1 is a [[3-, 4-.]] 5-[[.]] or 6- [[or 7-.]]membered saturated, partially saturated or unsaturated ring, wherein one carbon atom of said ring may be replaced by [[O, N or]] S;

R7, R8, and R9 are each independently hydrogen, F, Cl, Br, I, OH, CF₃, NO₂, CN, COOH, COO(C₁-C₆)-alkyl, CO(C₁-C₄)-alkyl, CONH₂, CONH(C₁-C₆)-alkyl, CON[(C₁-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₈)-alkoxy, HO-(C₁-C₆)-alkyl[[.]] or (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl, wherein said COO(C₁-C₆)-alkyl, CO(C₁-C₄)-alkyl, CONH(C₁-C₆)-alkyl, CON[(C₁-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₈)-alkoxy, HO-(C₁-C₆)-alkyl and (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl radicals are optionally substituted with one or more fluorine atoms,

~~SO₂-NH₂, SO₂NH(C₁-C₆)-alkyl, SO₂N[(C₁-C₆)-alkyl]₂, S-(C₁-C₆)-alkyl,~~
~~S-(CH₂)₆-phenyl, SCF₃, SO-(C₁-C₆)-alkyl, SO-(CH₂)₆-phenyl, SO₂-(C₁-C₆)-alkyl, SO₂-(CH₂)₆-phenyl,~~

wherein said ~~SO₂NH(C₁-C₆)-alkyl, SO₂N[(C₁-C₆)-alkyl]₂, S-(C₁-C₆)-alkyl, SO-(C₁-C₆)-alkyl and SO₂-(C₁-C₆)-alkyl~~ radicals are optionally substituted with one or more fluorine atoms, and wherein the phenyl ring of said ~~S-(CH₂)₆-phenyl, SO-(CH₂)₆-phenyl and SO₂-(CH₂)₆-phenyl~~ radicals is optionally mono- or disubstituted with F, Cl, Br, OH, CF₃, NO₂, CN, OCF₃, O-(C₁-C₆)-alkyl, (C₁-C₆)-alkyl or NH₂, and wherein o is as hereinabove defined;

~~NH₂, NH-(C₁-C₆)-alkyl, N((C₁-C₆)-alkyl)₂, NH(C₁-C₇)-acyl, phenyl or O-(CH₂)₆-phenyl,~~

wherein the phenyl ring of said phenyl and O-(CH₂)₆-phenyl radicals is optionally mono-, di-, or trisubstituted with F, Cl, Br, I, OH, CF₃, NO₂, CN, OCF₃, (C₁-C₈)-alkoxy, (C₁-C₆)-alkyl, NH₂, NH(C₁-C₆)-alkyl, N((C₁-C₆)-alkyl)₂, SO₂-CH₃, COOH, COO-(C₁-C₆)-alkyl or CONH₂, and wherein o is as hereinabove defined;

or R8 and R9 taken together with the carbon atoms to which they are attached form a 5-[[,]] or 6- or 7-membered, saturated, partially saturated or completely unsaturated ring herein referred to as Cyc2,

wherein one or two carbon atom[[s]] in said Cyc2 ring [[are]] is optionally replaced by [[N,]] O or S, and wherein said Cyc2 ring is optionally substituted with (C₁-C₆)-alkyl, (C₂-C₅)-alkenyl or (C₂-C₅)-alkynyl,

wherein said (C₁-C₆)-alkyl, (C₂-C₅)-alkenyl and (C₂-C₅)-alkynyl radicals are optionally substituted with F, Cl, OH, CF₃, NO₂, CN, COO-(C₁-C₄)-alkyl, CONH₂, CONH(C₁-C₄)-alkyl or OCF₃, and wherein a -CH₂- group contained in said (C₁-C₆)-alkyl, (C₂-C₅)-alkenyl and (C₂-C₅)-alkynyl radical[[s]] is optionally replaced by -O-;

and pharmaceutically acceptable salts thereof.

2. (currently amended) The compound of Claim 1 wherein:

R1 and R2 are each independently F or H or one of said radicals R1 and R2 may be OH, with the proviso that at least one of said radicals R1 and R2 is F;

R3 is OH;

R4 is OH;

A is O [[or NH]];

X	is C, O or N, with the proviso that X is C when Y is S;
Y	is N or S;
m	is 1 or 2;
R5	<p>is hydrogen, F, Cl, Br, I, OH, CF₃, NO₂, CN, COOH, CO(G₁-C₆)-alkyl, COO(G₁-C₆)-alkyl, CONH₂, CONH(G₁-C₆)-alkyl, CON[(G₁-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy, HO-(C₁-C₆)-alkyl[[.]] or (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl, phenyl, benzyl or (C₁-C₆)-alkoxycarboxyl,</p> <p>wherein said CO(G₁-C₆)-alkyl, COO(G₁-C₆)-alkyl, CONH(G₁-C₆)-alkyl, CON[(G₁-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy, HO-(C₁-C₆)-alkyl[[.]] and (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxycarboxyl and SO-(C₁-C₆)-alkyl radicals are optionally substituted with one or more fluorine atoms,</p>
	or when Y is S, R5 and R6 taken together with the carbon atoms to which they are attached may form a phenyl ring;
R6	is H[[.]] or (C ₁ -C ₆)-alkyl, (C ₂ -C ₆)-alkenyl, (C ₃ -C ₆)-cycloalkyl, or phenyl wherein said phenyl radical is optionally substituted with halogen or (C ₁ -C ₄)-alkyl;
B	is (C ₀ -C ₁₅)-alkanediyl, wherein one or more of the carbon atoms in said alkanediyl radical may be replaced, independently of one another, with -O-, -(C=O), -CH=CH-, C=C, S, CH(OH), CHF, CF ₂ , (S=O), (SO ₂), -N((C ₁ -C ₆)-alkyl), -N((C ₁ -C ₆)-alkyl-phenyl) or NH-CH ₂ - or -CO-NH-CH ₂ -;
n	is [[0, 1,]] 2[[.]] or 3 [[or 4]];
Cyc1	is a [[3-, 4-,]] 5-[[.]] or 6- [[or 7]]-membered saturated, partially saturated or unsaturated ring, wherein one carbon atom of said ring may be replaced by [[O or]] S;
R7, R8, and R9	are each independently hydrogen, F, Cl, Br, I, OH, CF ₃ , NO ₂ , CN, COOH, COO(G ₁ -C ₆)-alkyl, CO(G ₁ -C ₄)-alkyl, CONH ₂ , CONH(G ₁ -C ₆)-alkyl, CON[(G ₁ -C ₆)-alkyl] ₂ , (C ₁ -C ₆)-alkyl, (C ₂ -C ₆)-alkenyl, (C ₂ -C ₆)-alkynyl, (C ₁ -C ₈)-alkoxy, HO-(C ₁ -C ₆)-alkyl[[.]] or (C ₁ -C ₆)-alkyl-O-(C ₁ -C ₆)-alkyl, S-(C ₁ -C ₆)-alkyl, CF ₃ or SO-(C ₁ -C ₆)-alkyl,
	wherein said COO(G ₁ -C ₆)-alkyl, CO(G ₁ -C ₄)-alkyl, CONH(G ₁ -C ₆)-alkyl, CON[(G ₁ -C ₆)-alkyl] ₂ , (C ₁ -C ₆)-alkyl, (C ₂ -C ₆)-alkenyl, (C ₂ -C ₆)-alkynyl, (C ₁ -C ₈)-alkoxy, HO-(C ₁ -C ₆)-alkyl[[.]] and (C ₁ -C ₆)-alkyl-O-(C ₁ -C ₆)-alkyl, S-(C ₁ -C ₆)-alkyl and SO-(C ₁ -C ₆)-alkyl radicals are optionally substituted with one or more fluorine atoms,

or R8 and R9 taken together with the carbon atoms to which they are attached form a 5-[[,]] or 6- [[or 7-]] membered, ~~saturated~~, partially saturated or completely unsaturated ring herein referred to as Cyc2,

wherein one or two carbon atom[[s]] in said Cyc2 ring is optionally replaced by [[N,]] O or S, and wherein said Cyc2 ring is optionally substituted with (C₁-C₆)-alkyl, (C₂-C₅)-alkenyl or (C₂-C₅)-alkynyl, wherein said (C₁-C₆)-alkyl, (C₂-C₅)-alkenyl and (C₂-C₅)-alkynyl radicals are is optionally substituted with F, Cl, OH, CF₃, NO₂, CN, COO(C₁-C₄)-alkyl, CONH₂, CONH(C₁-C₄)-alkyl or OCF₃, and wherein a -CH₂- group contained in said (C₁-C₆)-alkyl, (C₂-C₅)-alkenyl and (C₂-C₅)-alkynyl radical[[s]] is optionally replaced by -O-.

3. (original) The compound of Claim 1 wherein the sugar residues are beta(β)-linked and the stereochemistry in the 2, 3 and 5 position of the sugar residue has the D-glucosidic configuration.

4. (currently amended) The compound of Claim 1 wherein:

R1 and R2 are each independently F or H or one of said radicals R1 and R2 may be OH, with the proviso that at least one of said radicals R1 and R2 is F;

R3 is OH;

R4 is OH;

A is O;

X is C, O or N, with the proviso that X is C when Y is S;

Y is N or S;

m is 1;

R5 is hydrogen, F, Cl, CF₃, OCF₃, COO(C₁-C₄)-alkyl, (C₁-C₅)-alkyl, (C₂-C₄)-alkenyl, (C₂-C₄)-alkynyl, (C₁-C₄)-alkoxy, HO-(C₁-C₄)-alkyl[[,]] or (C₁-C₄)-alkyl-O-(C₁-C₄)-alkyl, phenyl, benzyl, (C₁-C₄)-alkoxycarboxyl, OCH₂CF₃ or (C₁-C₄)-alkyl-CF₂-,

or when Y is S, R5 and R6 taken together with the carbon atoms to which they are attached may form a phenyl ring;

R6 is H[[,]] or (C₁-C₆)-alkyl, (C₂-C₅)-alkenyl, (C₃-C₆)-cycloalkyl, or phenyl wherein said phenyl radical is optionally substituted with halogen or (C₁-C₄)-alkyl;

B is (C₁-C₄)-alkanediyl, wherein one carbon atom in said alkanediyl radical may be replaced with -O-, (C=O), -CH(OH)-, CHF-, CF₂-, -CH₂- or -CO-NH-CH₂-;

n is 2 or 3;

Cyc1 is an unsaturated 5- or 6-membered ring, wherein one carbon atom of said ring may be replaced by [[O or]] S;

R7, R8, and R9 are each independently hydrogen, F, Cl, Br, I, OH, (C₁-C₄)-alkyl, OCH₂CF₃, (C₁-C₈)-alkoxy, HO-(C₁-C₆)-alkyl, (C₁-C₄)-alkyl-O-(C₁-C₄)-alkyl, S-(C₁-C₄)-alkyl, SCF₃ or OCF₃,

or R8 and R9 taken together form the radicals -C=CH-O-,

-CH=CH-S- or -CH=CH-CH=CH- and, with the carbon atoms to which they are attached, form an unsaturated or partially saturated 5- or 6-membered ring, said ring being optionally substituted by (C₁-C₄)-alkoxy or O-(CH₂)_p-O- wherein p is 1 or 2.

5. (currently amended) The compound of Claim 1 wherein:

R1 and R2 are each independently F or H,
with the proviso that at least one of said radicals R1 and R2 is F;

R3 is OH;

R4 is OH;

A is O;

X is C and Y is S, or
is O and Y is N, or
is N and Y is N;

m is 1;

R5 is hydrogen, CF₃, (C₁-C₆)-alkyl, or when Y is S, R5 and R6 taken together with the carbon atoms to which they are attached may form a phenyl ring,

R6 is H[[.]] or (C₁-C₄)-alkyl or phenyl;

B is -CH₂-, -C₂H₄-, -C₃H₆-, or -CO-NH-CH₂- or CO-CH₂-CH₂-;

n is 2 or 3;

Cyc1 is an unsaturated 5- or 6-membered ring, wherein one carbon atom of said ring may be replaced by S;

R7, R8, and R9 are each independently hydrogen, F, Cl, Br, I, (C₁-C₆)-alkyl, (C₁-C₄)-alkoxy, S-(C₁-C₄)-alkyl, SCF₃ or OCF₃,

or R8 and R9 taken together form the radicals -C=CH-O- or -CH=CH-CH=CH- and, with the carbon atoms to which they are attached, form an unsaturated or partially saturated 5- or 6-membered ring, said ring being optionally substituted by (C₁-C₄)-alkoxy.

6. (original) The compound of Claim 1 wherein:

- R1 and R2 are each independently F or H,
with the proviso that at least one of said radicals R1 and R2 is F;
- R3 is OH;
- R4 is OH;
- A is O;
- X is C and Y is S, or
is N and Y is N;
- m is 1;
- R5 is hydrogen, CF₃, (C₁-C₆)-alkyl, or when Y is S, R5 and R6 taken together
with the carbon atoms to which they are attached may form a phenyl ring,
- R6 is H or (C₁-C₄)-alkyl;
- B is -CH₂- or -CO-NH-CH₂-;
- n is 2 or 3;
- Cyc1 is phenyl or thiophene;

R7, R8, and R9 are each independently hydrogen or Cl,

or R8 and R9 taken together with the carbon atoms to which they are attached, form a
furan ring or a phenyl ring optionally substituted with methoxy.

7. (original) A pharmaceutical composition comprising a compound of Claim 1 and a
pharmaceutically acceptable carrier.
8. (canceled).
9. (withdrawn) A method of treating type 1 or type 2 diabetes which comprises
administering to a patient in need thereof a therapeutically effective amount of a
compound of Claim 1.
10. (withdrawn) A method of lowering blood glucose which comprises administering to a
patient in need thereof a therapeutically effective amount of a compound of Claim 1.
11. (withdrawn) A method of treating type 1 or type 2 diabetes which comprises
administering to a patient in need thereof a therapeutically effective amount of a
compound of Claim 1 with at least one other blood glucose-lowering active
ingredient.

12. (withdrawn) A method of lowering blood glucose which comprises administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 1 with at least one other blood glucose-lowering active ingredient.